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09/853,650	05/14/2001	Robert Ulrich	001580-756	9450

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EXAMINER

MUHEBBULLAH, SAJEDA

ART UNIT	PAPER NUMBER
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2174

MAIL DATE	DELIVERY MODE
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03/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/853,650	Applicant(s) ULRICH ET AL.	
	Examiner SAJEDA MUHEBBULLAH	Art Unit 2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28,32,41,43 and 53-95 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32,55 and 56 is/are allowed.
- 6) ☒ Claim(s) 28,41,43,57-65,68-77 and 80-95 is/are rejected.
- 7) ☒ Claim(s) 66,67,78 and 79 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to RCE/Amendment filed on 10/31/2007.
2. Claims 28, 32, 41, 43, and 53-95 are pending in this application. Claims 28, 32, 41, 43, 53, 55, 57, 68, 80, 83, 86, 89 and 92 are independent claims. Claims 92-95 have been added and claim 28 is amended.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 89 and 92 are rejected under 35 U.S.C. 102(e) as being anticipated by Obbink et al. (“Obbink”, US 5,767,835).

As per claim 89, Obbink teaches a method of providing user feedback in a graphical user interface for a computer, comprising the following steps:

in response to a user action that is performed with respect to an element of the graphical user interface, changing the display of said element from a first state to a second state (col.7, lines 4-15);

identifying a stored sound effect that is associated with a transition from said first state to said second state (col.8, lines 9-20); and

reproducing said identified sound effect in conjunction with said change in display states of said element (col.8, lines 9-20).

Claim 92 is similar in scope to claim 89, and is therefore rejected under similar rationale.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 28 and 80-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. ("Cohen", US 5,359,712) in view of Frushour (US 5,754,094).

As per independent claim 28, Cohen teaches a computer-readable medium having at least one data structure for use during execution of a program by a computer from which a sound effect can be produced encoded thereon, said data structure comprising:

a variable associated with delay of the identified sound (col.39, lines 1-7; col.40, lines 44-54); and

a separately recorded sound effect, wherein said recorded sound effect has at least one of a first sound segment for initiating said sound effect; a second sound segment which is repeatable to sustain said sound effect; and a third sound segment for decaying, at least one of which can be adjusted based on at least one of the variables associated with delay of an identified sound to vary the produced sound effect (col.5, lines 45-68; col.35, lines 58-61);

However, Cohen does teach wherein the at least one data structure includes a variable associated with gain and pitch of an identified sound to vary a produced sound effect wherein sound segments can be adjusted based on at least one of the variables. Frushour teaches a medium wherein an identified sound may be varied to produce different sound effects by varying gain or pitch (Frushour, col.3, lines 17-22; lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Frushour's teaching with Cohen's system in order to produce different sound effects.

The limitations of claims 80-88 and 95 have been addressed in claim 28 and are therefore rejected under similar rationale.

7. Claims 53-54, 57-58, and 61-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderheiden (US 6,049,328) in view of Frushour (US 5,754,094).

As per independent claim 53, Vanderheiden teaches in a graphical user interface, a method for providing sound effects comprising the steps of:

displaying an object in a first display state, said first display state having no sound effect associated with it; (col.6, lines 18-20; col.9, lines 64-67, col.10, lines 1-2);

identifying a sound effect using a state table, said sound effect being associated with a transition from a first display state to a second display state (col.9, lines 35-52; Fig.7); and

varying an output characteristic of said sound effect (col.7, lines 65-67; col.8, lines 1-9).

However, Vanderheiden does not expressly teach using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of the identified sound effect to vary the output characteristic and reproducing said sound effect using said varied output

Art Unit: 2174

characteristic. Frushour teaches a medium wherein an identified sound may be varied to produce different sound effects by varying gain or pitch (Frushour, col.3, lines 17-22; lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Frushour's teaching with Vanderheiden's system in order to produce different sound effects.

As per claim 54, Vanderheiden further teaches the method of claim 53, wherein said output characteristic is frequency (col.7, lines 65-67; col.8, lines 1-9).

As per independent claim 57, Vanderheiden teaches a method for providing a sound effect corresponding to movement of an object drawn on a graphical user interface of a computer system, the method comprising steps of:

drawing said object in a first display position of a display space controlled by said graphical user interface (Fig.5, *arrow 66*; col.7, lines 59-60);

receiving an indication of movement of said object, the movement being on said graphical user interface (Fig.5, *arrow 66*; col.7, lines 59-60); and

producing a plurality of sound segments (Fig.5, *sound segments 74, 76, 78, 80*) resulting from the object's movement on said graphical user interface (col.7, lines 59-67; col.8, lines 1-9).

However, Vanderheiden does not expressly teach using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments. Frushour teaches a medium wherein an identified sound may be varied to produce different sound effects by varying gain or pitch (Frushour, col.3, lines 17-22; lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Frushour's teaching with Vanderheiden's system in order to produce different sound effects.

As per claim 58, Vanderheiden teaches the method wherein at least one of the sound segments is repeatedly reproduced (Fig.5, *sound segment 74*).

As per claim 61, Vanderheiden teaches the method wherein repeatedly reproducing at least one of the sound segments comprises reproducing the least one of the sound segments at a volume specified for movement of said object (Fig.5, *audio track 72 at specified volume*).

As per claim 62, Vanderheiden teaches the method wherein repeatedly reproducing at least one of the sound segments comprises reproducing the least one of the sound segments at a pitch specified for movement of said object (col.8, lines 2-5).

As per claim 63, Vanderheiden teaches the method wherein repeatedly reproducing at least one of the sound segments comprises reproducing the least one of the sound segments after a delay specified for movement of said object (Fig.5, *delay between segments 76 and 80*).

As per claim 64, Vanderheiden teaches the method wherein producing the plurality of sound segments comprises:

producing an attack sound segment at the indication of movement (Fig.5, *segment 76*),
and

repeatedly producing a sustain sound segment until an indication of termination of movement (Fig.5, *segment 80*); and

transitioning out of the sustain sound segment by producing a decay sound segment (Fig.5, *segment 78*; col.8, lines 1-5).

8. Claims 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKiel, Jr. ("McKiel", US 5,374,924) in view of Frushour (US 5,754,094).

As per independent claim 41, McKiel teaches a computer system with a display and a sound effect system, said computer system comprising:

an input device for controlling movement of a cursor on said display, wherein said input device generates a cursor output in response to said cursor being positioned over a control element (col.3, lines 43-46);

a graphical user interface for rendering an object on said display at a first display position (Fig.1);

a speaker for producing a sound effect associated with movement of said object (col.2, lines 30-36);

a storage device for storing said sound effect (Fig.2, *sound hardware* 53); and

a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position (Fig.2, *CPU hardware* 33),

However, McKiel does not explicitly teach using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect. Frushour teaches a medium wherein an identified sound may be varied to produce different sound effects by varying gain or pitch (Frushour, col.3, lines 17-22; lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Frushour's teaching with McKiel's system in order to produce different sound effects.

As per claim 43, McKiel teaches a computer system with a display and a sound effect system, said computer system comprising:

an input device for controlling movement of a cursor on said display, wherein said input device generates a cursor output in response to said cursor being positioned over a control element (col.3, lines 43-46);

a graphical user interface for rendering an object on said display at a first display position (Fig.1);

first and second speakers for producing a sound effect associated with movement of said object (col.2, lines 30-36);

a storage device for storing said sound effect (Fig.2, *sound hardware 53*);

a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position (Fig.2, *CPU hardware 33*);

means for panning said sound effect between said first speaker and said second speaker in response to movement of the object (col.2, lines 30-36); and

means for varying a volume between said first speaker and said second speaker as compared to a recorded volume (col.3, lines 62-68).

However, McKiel does not explicitly teach using a data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary the produced sound effect. Frushour teaches a medium wherein an identified sound may be varied to produce different sound effects by varying gain or pitch (Frushour, col.3, lines 17-22; lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Frushour's teaching with McKiel's system in order to produce different sound effects.

9. Claims 59-60, 65, and 68-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderheiden (US 6,049,328) in view of Frushour (US 5,754,094), and further in view of McKiel, Jr. ("McKiel", US 5,374,924).

As per claim 59, the method of Vanderheiden and Frushour teaches all of the limitations except for the step of panning at least one of the sound segments between speakers as said object moves. McKiel teaches an interface with sound effects in which speakers are used to demonstrate the effect of an objects movement (col.2, lines 30-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include McKiel's teaching with the method of Vanderheiden and Frushour in order to provide the user the ability to determine the object's location within the display.

As per claim 60, McKiel teaches the method wherein panning between speakers comprises varying a volume between said speakers as compared to a recorded volume (col.3, lines 62-68).

As per claim 65, McKiel teaches the method comprising selecting, from within a range of frequencies, a frequency for repeatedly reproducing said at least one sound segment (col.4, lines 8-20).

As per independent claim 68, Vanderheiden teaches a computer system with a display and a sound effect system said computer system comprising:

an input device for controlling movement of a cursor on said display (col.4, lines 35-37), wherein said input device generates a cursor output in response to said cursor being positioned over a control element (Fig.5);

a graphical user interface for rendering an object on said display at a first display position (col.4, lines 29-32);

a storage device for storing said sound effect (Fig.1, *memory 40*); and

the sound effect having a plurality of sound segments that are each associated with the object's movement on said graphical user interface (Fig.5, 72; col.7, lines 59-67; col.8, lines 1-9)

However, Vanderheiden fails to teach a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position and does not expressly teach using at least one data structure which includes a variable parameter associated with at least one of gain, delay and pitch of an identified sound to vary at least one of the sound segments. Frushour teaches a medium wherein an identified sound may be varied to produce different sound effects by varying gain or pitch (Frushour, col.3, lines 17-22; lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Frushour's teaching with Vanderheiden's system in order to produce different sound effects.

Furthermore, the system of Vanderheiden and Frushour fails to teach a processor for controlling the speaker to produce said sound effect in response to movement of the object from the first display position. McKiel teaches an interface with sound effects in which speakers are used to demonstrate the effect of an objects movement (col.2, lines 30-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include McKiel's teaching with the system of Vanderheiden and Frushour in order to provide the user the ability to determine the object's location within the display.

As per claim 69, McKiel teaches the system wherein said speaker is a first speaker, the system further comprising a second speaker for outputting said sound effect; and means for panning said sound effect between said first speaker and said second speaker in response to movement of the object (col.2, lines 30-36).

As per claim 70, McKiel teaches said means for panning to further comprise means for varying a volume between said first speaker and said second speaker as compared to a recorded volume (col.3, lines 62-68).

As per claim 71, Frushour teaches the system wherein a data structure associated with said sound effect includes a volume parameter specified for output of said sound effect (col.3, lines 17-22).

As per claim 72, Frushour teaches the system wherein a data structure associated with said sound effect includes a pitch parameter specified for output of said sound effect (col.3, lines 17-22).

As per claim 73, Frushour teaches the system wherein a data structure associated with said sound effect includes a volume gain parameter specified for output of said sound effect (col.3, lines 17-22).

As per claim 74, Vanderheiden teaches the system wherein a data structure associated with said sound effect includes an attack segment, a sustain segment, and a decay segment (Fig.5, *sound segments* 76, 80, 78).

As per claim 75, Vanderheiden teaches the system to further comprise means for retrieving, prior to retrieving said sustain sound segment, said attack sound segment; and

wherein said attack sound segment is reproduced prior to repeatedly reproducing said sustain sound segment (Fig.5, *attack segment 76, sustain segment 80*).

As per claim 76, Vanderheiden teaches the system wherein said means for retrieving further comprises means for retrieving and reproducing, after said second display position is reached, said decay sound segment (col.8, lines 1-9).

As per claim 77, McKiel teaches the system to further comprise means for selecting, from within a range of frequencies, a frequency for repeatedly reproducing said sound effect (col.4, lines 8-20).

10. Claims 90-91 and 93-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obbink et al. (“Obbink”, US 5,767,835) in view of Frushour (US 5,754,094).

As per claim 90, Obbink teaches the method of claim 89, wherein said stored sound effect is reproduced with a predetermined value for said parameter (Obbink, col.8, lines 9-20). However, Obbink does not explicitly teach a variable parameter. Frushour teaches a medium wherein an identified sound may be varied to produce different sound effects by varying gain or pitch (Frushour, col.3, lines 17-22; lines 32-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to include Frushour’s teaching with Obbink’s system in order to produce different sound effects.

As per claim 91, the method of Obbink and Frushour teaches the same stored sound effect is reproduced with different values for different respective transitions in the display state of said element (Frushour, col.3, lines 17-22, lines 32-36).

Claims 93-94 are similar in scope to claims 90-91 respectively, and are therefore rejected under similar rationale.

Response to Arguments

11. Applicant's arguments with respect to RCE/Amendment filed on 10/31/2007 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

12. Claims 32 and 55-56 are allowed.

13. Claims 66-67 and 78-79 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Specifically, as per claims 66-67 and 78-79, the prior art fails to teach, in combination with the remaining elements:

the method wherein selecting a frequency comprises setting said range of frequencies to an envelope of about plus or minus 2.5 percent of an original frequency at which said at least one sound segment was recorded, as well as the selection being weighted from within said envelope as cited in claims 66-67 and 78-79.

Although McKiel teaches a bounded frequency based on the movement of an onscreen object, the range of frequency is quite large, on the order of plus or minus sixty percent. While the range claimed, about 2.5 percent, is certainly within the range of the reference, to use the reference range in substitution for the claimed range would destroy the utility of the claimed invention.

Communications

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajeda Muhebbullah whose telephone number is **(571) 272-4065**. The examiner can normally be reached on Tuesday/Thursday and alt. Mondays from 8:30 am to 5:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923

The central fax number for the organization where correspondence for this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sajeda Muhebbullah
Patent Examiner
Art Unit 2174
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Application/Control Number: 09/853,650
Art Unit: 2174

Page 15

/David A Wiley/

Supervisory Patent Examiner, Art Unit 2174